

MAKAROVA, A. P.

MAKAROVA, A. P.: "Variations in the soluble proteins in the feces in chronic nutrition disorders of children." Leningrad Pediatric Medical Inst. Leningrad, 1956. (Dissertations for the Degree of Candidate in Medical Sciences).

SO: Knizhnays Letopis' No. 22, 1956

LEVIYEVA, L.S.; KAND, M.E.; ~~MAKAROVA~~, A.P.; POZHOGINA, P.M.

Technological and chemical characteristics of some fishery products.
Trudy VNIRO 35:192-204 '58. (MIRA 11:11)
(Fishery products--Chemical composition)

MAKAROVA AP

USSR

Thermometric analysis of the Al₂O₃ hydrates. P. V. Gerasimov, V. A. Vasilkov, and A. P. Malanin. *Vopr. Prikl. Khim.*, 1963, **36**, No. 10, 2000-2004. 445-8 (1963). The weight loss vs. temp. curve of synthetic gibbsite shows sharp peaks at 390 and 490° which correspond to the peaks of the thermometric measurements at 202 and 445° (Ref.). The latter effect indicates the dehydration of the newly formed boehmite. Crystals and pulverized natural gibbsite show on the thermometric curves the sharp peak at 225°, and only a slight indication of an effect above 400°. Diaspore from Ural (Tas, Ural) has a dehydration peak at 410° for the monocrystal, at 400° for the powder (10 to 100 μ grain size). Boehmite from Kirovskan Log, Ural shows the sharp peak at 350°; synthetic boehmite at 445° on the dehydration curves. Nonequilibrium, e.g. the formation of boehmite from gibbsite at 250° to 350°, are often observed by rapid heating and wt. loss data. The thermometric method gives a far better approximation to the real equil. conditions in every case. W. Bital.

MAKAROVA, A.N.; BERLIN, A. Vt.

Reaction of diacyloxydihalo-1,4-benzoquinines with amines.

Part 2. Zhur. org. khim. 1 no. 12:2159-2164 D '65
(MIRA 19:1)

1. Institut eksperimental'noy i klinicheskoy onkologii ANI SSSR.
Submitted October 10, 1964.

MAKAROVA, A.N.; BERLIN, A.Ya.

Derivatives of 2,5-dihydroxy-3,6-diaceto-1,4-aminobenzoquinone.
Zhur. ob. khim. 34 no.9:3037-3041 S '64.

(MIRA 17:15)

1. Institut eksperimental'noy i klinicheskoy onkologii ANU SSSR.

MARTYNOV, V.S.; MAKAROVA, A.N.; BERLIN, A.Ya.

2,6-Difluoro-3,5-diethylenimino-1,4-benzoquinone. Zhur. ob.
khim. 34 no.8:2807-2808 Ag '64. (MIRA 17:9)

1. Institut eksperimental'noy i klinicheskoy onkologii AMN SSSR.

MAKAROVA, A.N.; MARTYNOV, V.S.; BERLIN, A.Ya.

Diaminodiethyleneiminobenzoquinones. Part 1: Reactions of
fluoranil with amines and with esters of α -amino acids. Zhur.
ob. khim. 33 no.5:1643-1647 My '63. (MIRA 16:6)

1. Institut eksperimental'noy i klinicheskoy onkologii AMN SSSR.
(Benzoquinone) (Amines) (Amino acids)

12341-63

S/081/63/000/005/033/075

Substitution reactions in

a complete replacement of the Cl atoms with formation of 2,5-di-(ethyleniminoaceta-
mino)-3,6-diethyleniminoquinone (XII), yield 80%, m.p. 217°C (decomp.). Under the
action of HCl or HCl gas on XII or XI, corresponding β -chloroethylamines were
obtained. On the basis of the data obtained a series of replacements in the nucleus
of benzoquinone were established in order of case when treated with amines or esters
of amino acids. A series of synthesized substances were forwarded for oncological
testing. S. Suminov.

[Abstractor's note: Complete translation]

Card 4/4

L 12341-63

8/081/63/000/005/033/075 O

Substitution reactions in

di-(N-alanino)-3,6 difluorquinone, 75, 132 - 133 and 178 - 179 (dimorphism); diethyl ester of 2,5-di-(N-phenylalanino)-3,6-difluorquinone, 76, 123 - 124 and 179 - 180. In reaction of VII with amines and esters of amino acids a total substitution of F atom occurs with formation of corresponding (same data are presented): 2,5-diethyl-enimino-3,6-dipiperidinoquinone, 84, 175 - 176; diethyl ester of 2,5-diethylenimino-3,6-dipiperidinoquinone, 84, 175 - 176; diethyl ester of 2,5-diethylenimino-3,6-di-(N-alanino)-quinone, 25 - 30, 147.5 - 148; diethyl ester of 2,5-diethylenimino-3,6-di-(N-phenylalanino)-quinone, 20, 178 - 179. A synthesis of diethyleniminoquinones with amid groups was accomplished. For this by heating 2,5-dichloroacetamino-3,6-dichlorquinone (VIII) with NH_3 in dioxane there was obtained 2,5-diglycylamino-3,6-dichlorquinone (IX), with yield of 85%, decomposition temperature $> 360^\circ\text{C}$. The heating of IX in medium VI led to 2,5-diglycylamino, 3,6-diethylenimino-quinone (X), yield 65%, temp. variable $> 360^\circ\text{C}$. In the actions on X HCl (concentrate) there occurs a fractionizing of heterocycles with formation of chlorhydrates of 2,5-diglycylamino-3,6-di (β -chloroethylamino)-quinone, yield 65%, decomposition temperature $> 360^\circ\text{C}$. In the action of VI on solutions VIII in dioxane was obtained 2,5-di-(ethyleniminoacetamino)-3,6-dichlorquinone (XI), yield 75%, m.p. 197°C (decomp.). The treatment of VII or XI with excess VI led to

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12341-63

8/081/63/000/005/033/075 /

Substitution reactions in

20, 63, 157 - 158; H, Cl, $C_6H_5CH_2$, 3, 80, 207 - 208; H, OC_2H_5 , $C_6H_5CH_2$, 440, 34, 204 - 205; Cl, Cl, $iso-C_3H_7$, 30, 95, 200 - 223; Cl, Cl, C_6H_{11} (IVa), 13, 93, 233 - 234; Cl, Cl, $C_6H_5CH_2$ (IVb), 5, 90, 220 - 223; Cl, Cl, C_6H_5 , 120, 55, 285 - 286.

II reacted in the same manner, but significantly slower. Concurrently, the exchange of the atoms of chlorine with amine groups occurred, leading to IVa, b with yields of 50 and 30% respectively. The regrouping mechanism was not studied. Only in the case of III initially or concurrently with the replacement of the ethylenimino group the replacement of the Cl atom by amine groups occurred with formation of 2-ethylenimino-5-(N-morpholinyl)- or 2-ethylenimino-5-cyclohexylamino-3,6-dichloroquinone. Already at 20°C it appeared possible to obtain satisfactory yields of reaction products. The same behavior was confirmed on the example of reactions of I - III with methyl or ethyl ester of α -aniline (V). However, fluoranalogs of I - III under the same conditions disclosed considerable mobility of the F atom, sufficient, for preparative purposes. In the treatment of aniline fluoride with 4 moles of ethylenimine (VI), V or ethyl ester of α -phenyl- β -aniline were obtained (here and henceforth are shown the substance, the yield in %, and m.p. in °C); 2,5-diethylenimino-3,6-difluorquinone (VII), 72, 211 - 213; diethyl ester of 2,5-

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12341-63

ENT(m)/BDS RM

S/081/63/000/005/033/075 53

AUTHOR: Makarova, A. N., Gribkova, M. P., Martynov, V. S. and Berlin, A. Ya.

TITLE: Substitution reactions in a series of derivatives of benzoquinone-1,4

PERIODICAL: Referativnyy zhurnal, Khimiya, no. 5, 1963, 203-204, abstract 5Zh131
(Puti sinteza i izyskaniya protivopukholsykh preparatov, M, Medgiz, 1962, 165-174)

TEXT: Substitution reactions were investigated of functional groups by the amino-groups in 2,5-diethylenimino-3-R-6-R'-benzoquinones-1,4 (I), 2,6-diethylenimino-3,5-dichlorbenzoquinone-1,4 (II) and 6-monoethylenimino-2,3,5-trichlorbenzoquinone-1,4 (III). In almost all cases anomalous trends were discovered in the reactions. Thus, in treating I with primary amines R''NH₂ a substitution of ethylenimino groups by amino groups occurs with formation of corresponding 2,50(R''NH)₂-3-R-6-R'-benzoquinones-1,4 (IV). The speed of reaction depends, to a significant degree, on the nature of the replacements and on the basic characteristics of the amines. The following IV were obtained (below are given R, R', R'', time of reaction in min, yield of IV in % and m.p. in °C): H, H, iso-C₃H₇, 40, 90, 240 - 241; H, H, C₆H₁₁, 18, 94, 239 - 240; H, H, C₆H₅, 10, 80, 250 - 251; H, Cl iso-C₃H₇,

Card 1/4

MAKAROVA, A.N.; YEGOROVA, Z.M.; BERLIN, A.Ya.

Derivatives of di(α -aminoacylamido)-1,4-benzoquinones. Part 1:
Reaction of 2,5-dichloroacetamino-3,6-dichloro-1,4-benzoquinone
with ammonia and ethylenimine. Zhur.ob.khim. 32 no.4:1285-1289
Ap '62. (MIRA 15:4)
(Benzoquinone) (Ammonia) (Ethylenimine)

MAKAROVA, A.N.; BERLIN, A.Ya.

Interaction of ethyleneiminochloro-1,4-benzoquinones with
 α -alanine ethers. Zhur.ob.khim. 31 no.7:2353-2358 J1 '61.
(MIRA 14:7)

1. Institut eksperimental'noy i klinicheskoy onkologii
Akademii meditsinskikh nauk SSSR.
(Benzoquinone) (Alanine)

BERLIN, A.Ya.; MAKAROVA, A.N.

Some reactions of bis(β -hydroxyethyl)amino-*p*-benzoquinone. Part
2. Zhur. ob. khim. 30 no.11:3718-3721 N'60. (MIRA 13:11)

1. Institut eksperimental'noy i klinicheskoy onkologii AMN SSSR.
(Benzoquinone)

BERLIN, A.Ya.; MAKAROVA, A.N.

Interaction between ethoxychloroquinones and amines. Part 2:
Reactions of monoethoxytrichloro-*p*-benzoquinone. Zhur.ob.
khim. 30 no.5:1582-1585 My '60. (MIRA 13:5)

1. Institut eksperimental'noy i klinicheskoy onkologii Akademii
meditsinskikh nauk SSSR.
(Benzoquinone) (Amines)

MAKAROVA, A.N.; GRIBKOVA, M.P.; BERLIN, A.Ya.

Interaction between acyloxydichloro-p-benzoquinones and amines.
Zhur.ob.khim. 30 no.5:1577-1581, 1966 (MIRA 13:5)

1. Institut eksperimental'noy i klinicheskoy onkologii Akademii
meditsinskikh nauk SSSR.
(Benzoquinone) (Amines)

Reaction of Ethoxychloroquinone With Amines. S/079/60/030/04/76/080
 I. Reactions of Diethoxydichlorobenzoquinone-1,4 B001/B003

action of 2,5 dichloro-3,6-dichloroquinone with ethylene imine which also results from chloranil and ethylene imine (Ref. 3). Quinone (V) (Scheme) also results from 2,6-diethoxy-3,5-dichloroquinone. On the strength of previous experience (Refs. 12,13) the authors utilized the reaction of 2,5-diethylene iminobenzoquinone with various amines in order to obtain the derivatives of the 2,6-diamino-3,5-dichloroquinone. When compound (V) is reacted with benzylamine, cyclohexylamine and morpholine a new interesting kind of regrouping is additionally determined. Instead of the derivatives of 2,6-diamino-3,5-dichlorobenzoquinone derivatives of 2,5-diamino-3,6-dichlorobenzoquinone (VI, VII and VIII) formed, i.e., the same compounds which were obtained from compound (IV) or from (I) and the amines indicated. Thus, 2,5-diethyleneimino-3,6-dichlorobenzoquinone-1,4 and 2,6-diethyleneimino-3,5-dichlorobenzoquinone-1,4 were synthesized in the reaction of 2,5-diethoxy-3,6-dichlorobenzoquinone and of the 2,6-diethoxy-3,5-dichlorobenzoquinone with ethyleneimine. There are 1 table and 15 references, 3 of which are Soviet.

SUBMITTED: March 20, 1959

Card 2/2

S/079/60/030/04/76/080
B001/B003

AUTHORS: Berlin, A. Ya., Makarova, A. N.

TITLE: Reaction of Ethoxychloroquinone With Amines. I. Reactions
of Diethoxydichlorobenzoquinone-1,4

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 4, pp. 1380-1385

TEXT: In continuation of Refs. 6-8 regarding the formation of the derivatives of 2,5-diamino-3,6-dichlorobenzoquinone in the article under review certain interesting facts were discovered in the investigation of the reaction of 2,5-diethoxy-3,6-dichloro-benzoquinone and 2,6-diethoxy-3,5-dichlorobenzoquinone with amines. Until now, no derivatives of the 2,6-diaminobenzoquinone or 2,6-diamino-3,5-dichlorobenzoquinone were obtained (Refs. 9-11). The 2,5-diethoxy-3,6-dichlorobenzoquinone-1,4 and 2,6-diethoxy-3,5-dichlorobenzoquinone-1,4 compounds required for the investigation were obtained by heating an alcoholic suspension of chloranil in the presence of triethylamine in a molar ratio of 1:2 between chloranil and triethylamine in a ratio of 1:1 a mixture of all three ethoxychlorobenzoquinones results. Quinone (IV) was obtained by the re-

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Reaction of Ethylene Imino Benzoquinones-1,4 With SOV/79-29-2-64/71
Amines. I. Reaction of Ethylene Imino Benzoquinone -1,4 With Secondary Amines

6 new compounds were synthesized. It was found that on the reaction of ethylene imino quinones with amines, cleavage products of the ethylene imino cycle of the bis-(alkylamino ethylamino)-quinone-type are formed and also products of the substitution of ethylene imino radicals by those taken in the reaction of secondary amines were found to occur. It was shown that the facility of the cleavage of the ethylene imino cycle in ethylene imino quinones depends on the character of the substituents in the quinone nucleus. There are 2 tables and 20 references, 6 of which are Soviet.

ASSOCIATION: Institut eksperimental'noy patologii i terapii raka Akademii meditsinskikh nauk (Institute of Experimental Pathology and Cancer Therapy of the Academy of Medical Sciences)

SUBMITTED: December 23, 1957

Card 2/2

AUTHORS: Makarova, A. N., Berlin, A. Ya.

SOV/79-29-2-64/71

TITLE: Reaction of Ethylene Imino Benzoquinones-1,4 With Amines (Vzaimodeystviye etileniminobenzokhinonov-1,4 s aminami).
I. Reaction of Ethylene Imino Benzoquinone-1,4 With Secondary Amines (I. Reaktsiya mezhdru etileniminobenzokhinonami-1,4 i vtorichnymi aminami)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 2, pp 666-672 (USSR)

ABSTRACT: The task of the work under review was the reaction of 2,5-diethylene imino benzoquinone-1,4, as well as of 2,5-dichloro and 2,5-diethoxy-3,6-diethylene imino benzoquinone-1,4 with secondary amines. The reaction of ethylene imino quinones with secondary amines may take place in two directions (Scheme). In most cases it proceeds smoothly and in good yields on briefly heating the diethylene imino quinones with an excess of amine in the methanol medium or without solvent. Only in the reaction of 2,5-diethylene imino quinone and 2,5-dichloro-3,6-diethylene imino quinone with diethyl amine, ammonium chloride was used as catalyst. Experimental conditions and the compounds synthesized in this connection are specified in table 1, and their physical properties in table 2.

Card 1/2

The Condensation of ω -Bromacetophenone With Diethanolamine.

79-1-31/63

of anhydrous ethyl alcohol converted to the hydrochloride of acetal-2-phenyl-2-ethoxy-4- β -oxy-ethylmorpholin (III, R = C_2H_5) which by naturalization with potash easily leads to the base. The hydrochloride of the acetal hydrolizes at 70°C under the formation of semiacetal. The acetal (III) was liberated from the hydrochloride by potash and characterized as iodomethylate and picrate. Semiacetal does not lead to any semicarbazone. By the influence of semicarbacide upon it a solid body with much nitrogen is obtained, which is also the case with acetal. With some reagents semiacetal reacts like a typical α -aminoketone. Thus it rapidly reduces Fehling's solution and the ammonia solution of silver oxide, in contrast to acetal (III). On heating with concentrated hydrochloric acid semiacetal splits off water and is converted to 2-phenyl-4- β -oxyethyl-5,6-dihydroxazine-1,4 (IV). There are 5 references, 1 of which is Slavic.

ASSOCIATION: Institute for Experimental Pathology and Cancer Therapy
(Institut eksperimental'noy patologii i terapii raka).
SUBMITTED: January 2, 1957
AVAILABLE: Library of Congress
Card 2/2 1. Chemistry 2. Cyclic compounds-Condensation

MAKAROVA, A. N.

AUTHORS: Mikhaylov, B. M., Makarova, A. N. 79-1-31/63

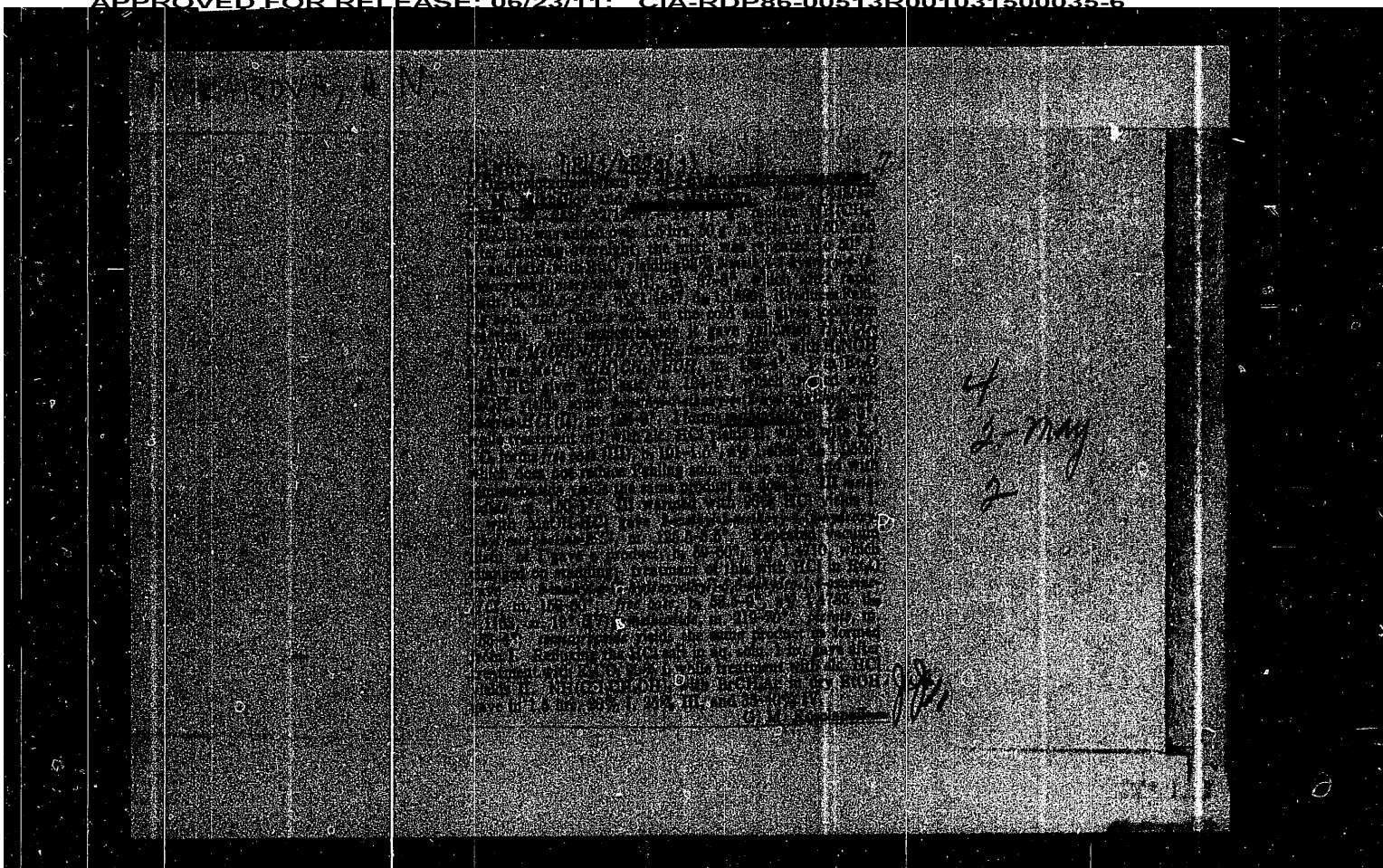
TITLE: The Condensation of ω -Bromacetophenone With Diethanolamine
(O kondensatsii ω -bromatsetofenona s dietanolaminom).

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr 1, pp. 150-153
(USSR).

ABSTRACT: It was of interest to investigate the properties of the condensation product of ω -haloidacetophenone with diethanolamine and to find out whether it actually possesses a chain structure as suggested by Brighton and Reid (reference 1) or whether it represents a cyclic compound. In order to synthesize this product the ethereal solution of ω -bromacetophenone was added to diethanolamine. The smooth reaction led with a good yield to a compound with a melting point of 77-78° C (not 44° C, as indicated). It was determined that it is no oxyaminoketone (formula I) but its tautomeric form, a cyclic semiacetate, i.e. a 2-phenyl-2-oxy-4- β -oxyethylmorpholin (II) (see formulae). Compound (II) easily changes already at room temperature; it soon turns yellow or becomes resinous. The hydrate, obtainable by recrystallization in water, loses the water again on heating. The hydrochloride of the semiacetal (II) is by the influence

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031500035-6



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CA

IV gives an immediate ppt. of brown Cu salt, having 1 Cu atom/2 moles oxime, insol. in dil. acids or NH_4OH , sol. in pyridine; hence, this is the *syn*-form. Both forms are of approx. equal stability in this case. III giving IV on heating to 100° , while IV changes to III on treatment with dry HCl or ultraviolet irradiation. Beckmann rearrangement of III with PCl_5 in ice-cooled Et_2O gave *N*-methyl-2-pyrrolicarboxamide, m. $151-2^\circ$, identical with an authentic sample (above); IV also gave this amide, indicating isomerization of the *syn* to the *anti* form under the action of PCl_5 . Boiling 2-butyrylpyrrole 8 hrs. with KOH (OH)Cl and Na_2CO_3 in H_2O gave the oxime, m. 149° , a very stable substance; no other form was isolated under any conditions. This oxime readily gives the Cu salt having 1 Cu atom/2 moles oxime, thus indicating it is the *syn*-form. 2-Benzoylpyrrole gave an oxime only after boiling 60 hrs.; this m. 147° and gave a Cu salt only on prolonged shaking, the salt being of ionic type, with 1 Cu atom/mole oxime, indicating it is the *anti*-form. If 0.2 g. 2-benzoylpyrrole is boiled 30 hrs. with 0.2 g. NH_4OH Cl and 1.1 g. Na_2CO_3 in H_2O , the oxime m. $60-120^\circ$, and on crystn. from aq. EtOH gives 2 oximes: (V), m. 147° as above, and (VI), m. 58° , which at $150-61^\circ$ (and also same with dry HCl) forms V; VI gives a brown inner complex Cu salt, indicating it is the *syn*-form. G. M. K.

MAKAROVA, A. N.
CA

Stereoisomerism of oximes of 2-pyrrolicarboxaldehyde and 2-pyrrolic ketones. A. P. Terent'ev and A. N. Makarova (Moscow State Univ.), *Zhur. Obshchei Khim.* (J. Gen. Chem.) 21, 270-8 (1951).—2-Pyrrolicarboxylic acid, m. 204°, from $\text{NC}_4\text{H}_7\text{MgI}$, with SOCl_2 yielded 60% of the amide, m. 100°, which with MeNH_2 gave 60% *N*-methyl-2-pyrrolicarboxaldehyde, which, warmed with NH_4OH gave the oxime (I), m. 164° (from CHCl_3); if heating is omitted the oxime slowly forms at room temp. and the 1st crop m. 164°, as above, but there also seps. a 2nd crop of larger crystals, m. 70-1° (II), an unstable stereoisomer of I, which on heating above the m.p. slowly changes to I; the same occurs on crystn. from hot H_2O or EtOH , by the action of HCl , irradiation with ultraviolet light, or on standing in the open air. I does not form a ppt. with Cu acetate in dil. soln., merely giving a green color; in concd. solns. it forms a voluminous ppt. of a green Cu salt, contg. 1 Cu atom/mole oxime, sol. in dil. acids and NH_4OH ; this salt is not an inner complex type and must be that of the *anti*-form of the oxime. II with Cu acetate immediately gives a brown ppt. of a Cu salt, insol. in dil. acids or NH_4OH , but sol. in pyridine; it has 1 Cu atom/2 moles oxime and must be the inner chelated complex salt of the *syn*-form. When 2-acetylpyrrole oxime



is prepd. in hot MeOH [Ciamician and Demstedt, *Bull. chim. ital.* 13, 445 (1880)] it m. 145°; if heating extends 10 hrs. the product has a wide m.p., 85-90°. Isolated and crystd. from EtOH and H_2O , it yields 2 products: needles (III), m. 145°, and a micropowder (IV), m. 82°. III with Cu acetate gives a ppt. only after standing 2 days, this has 1 Cu atom/mole oxime and is ionic in nature, being sol. in acids and NH_4OH . Hence III is the *anti*-form

M AKAROVA, N. K.

PA 48/49T19

USSR/Chemistry - Hydrocarbons Feb 49
Chemistry - Catalysis

"Irreversible Catalysis and Catalytic Dehydrogenation of Hydrocarbons on Activated Carbon, G. A. Rudakov, N. P. Borisova, O. A. Yemeltanova, I. G. Yeroshevalsky, N. F. Koshilov, A. N. Makarova, N. M. Merlis, Z. S. Khomenko, Gen. Sci Res Inst of Wood-Pulp Chem, 184 pp

"Zhur Priklad Khim" Vol XXII, No 2

Investigation carried out on pure terpenes and a naphthene hydrocarbon, n-methane, showed that activated carbon brings about irreversible

48/49T19

USSR/Chemistry - Hydrocarbons (Contd) Feb 49

catalysis and dehydrogenation of hydrocarbons. This confirmed conclusions made long ago by Russian scientists working on pyrolysis of petroleum. Describes reactions in detail. Submitted 13 Mar 48.

48/49T19

COMMON ELEMENTS		PROCESSES AND PROPERTIES INDEX	
<p>MAKAROVA, N. Y.</p> <p>CA</p>		<p>The stereoisomerism of the oxime of 2-acetypyrrole. A. P. Terent'ev and A. N. Makarova. <i>Vestnik Moskov. Univ.</i> 1947, No. 4, 101-4. —Short (1.5-2 hrs.) boiling of 2-acetypyrrole in alc. with $\text{NH}_4\text{OH} \cdot \text{HCl}$ gave only one oxime, m. 145°. On long (10 hrs.) boiling, the product m. 90° and can be sepd. by crystn. into a compd. m. 82° (I) and the ordinary oxime m. 145° (II). I is a stereoisomer of II which can be converted into I by heating in soln., by melting to 160°, or by distn.; conversion of I into II can be brought about by the action of ZnMe, by passing a stream of HCl through an ether soln., or by 30 hrs. irradiation in benzene with a quartz Hg lamp; I is the more thermostable form. Beckmann rearrangement gave with I and with II the same product, identified as <i>N</i>-methyl-2-pyrrolicarboxamide, m. 151°; evidently, I was converted into II under the action of traces of HCl; while not conclusive, this reaction would indicate that II is the anti form. With a satd. aq. soln. of $\text{Cu}(\text{OAc})_2$, the ether soln. of I gives a brown ppt., insol. in dil. AcOH, sol. in glacial AcOH and in pyridine, contg. 0.5 atom Cu per mol. oxime, and I is evidently <i>syn</i>-Me 2-pyrrolyl ketoxime. II gives a ppt. only in concd. soln.; the salt is a typical electrolyte, dissolves in H_2O with a green color and in NH_3 with a bright-blue color, and contains 1 atom Cu per 1 oxime; II evidently is <i>anti</i>-Me 2-pyrrolyl ketoxime. N. Thon</p>	
ASR-51A METALLURGICAL LITERATURE CLASSIFICATION		EXTRACTED INDEX	
<p>FROM STIRLING</p> <p>SECONDARY ONLY ONE</p>		<p>EXTRACTED INDEX</p> <p>1ST AND 2ND INDEX</p>	

COMMON ELEMENTS																										1ST AND 2ND ORDERS																										3RD AND 4TH ORDERS																																																																																																																																																																																																																																																																																																																																					
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<p>The stereoisomerism of 2-pyrrolecaboaldehyde. A. P. Terent'ev and A. N. Makarova. <i>Vestnik Mosk. Univ.</i> 1947, No. 4, 97-100. On oxidation of 2-pyrrolecaboaldehyde (0.3 g.) with $\text{NH}_4\text{OH} \cdot \text{HCl}$ without heating wherein 2 kinds of crystals were obtained: 0.2 g. of a fine cryst. powder m. 164° (I) (from CHCl_3), identical with the oxime of Bamberger and Djerdjan (<i>Ber.</i> 33, 530 (1900)), and 0.1 g. of coarser crystals (II) m. $70-1^\circ$, which, when heated above the m.p., first fused to a clear melt, became turbid at $120-130^\circ$, solidified at $160-180^\circ$, and melted again at 184°; I and II evidently are stereoisomers. The unstable II is converted into I by recrystn. from hot water or from alc., by treatment with HCl, or by irradiation in benzene with a quartz Hg lamp; in air, II goes over into I in 2-3 weeks. By analogy with other aldoximes, II is the syn form. With $\text{Cu}(\text{OAc})_2$, I gave no ppt. in dil. soln., only a color change from blue to green; in concd. soln. a green Cu salt pptd., sol. in dil. acids and in NH_3, and contg. 1 atom Cu per mol. oxime; II gave a brown ppt. even in very dil. soln., insol. in dil. acids and in NH_3, and contg. approx. $\frac{1}{2}$ atom Cu per mol. oxime. N. Thon</p>																																																																																																																																																																																																																																																																																																																																																																																									
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The Formation and Properties of Metallic Soaps in Diluted Aqueous Solutions
SOV/20-124-4-34/67
erences, 5 of which are Soviet.

ASSOCIATION: Kol'skiy filial im. S. M. Kirova Akademii nauk SSSR
(Kola Branch imeni S. M. Kirov of the Academy of Sciences,
USSR)

PRESENTED: October 6, 1958, by P. A. Rebinder, Academician

SUBMITTED: September 30, 1958

Card 3/3

SOV/20-124-4-34/67

The Formation and Properties of Metallic Soaps in Diluted Aqueous Solutions

soaps with following chemical conversion. The hydrolytically formed basic salts (among them also the complex cations) form slightly "basic" soaps; their composition varies with increasing pH-value of chemically incomplete compounds (with respect to substitution by palmitic acid) up to chemo-sorption-like compounds of the basic soap with different degrees of adsorption of OH. For the purpose of confirming the general scheme of the metal soaps Fe^{2+} - and Fe^{3+} -palmitates were produced. The manner in which the soaps are formed from the reacting solutions is able to model the processes occurring in the presence of these soaps. In the case under investigation it was important to add a solution of sodium palmitate with different content of free NaOH to the solution of the iron salt sulfate with different content of free H_2SO_4 . The theoretical-

ly determined general character of the dependence of the composition of the soaps on the pH-value agrees satisfactorily with experimental values. The stability of the "basic" soaps increases with increasing pH-value, and at pH-values of 10-11 a highly stable sol is formed. The authors thank Academician P. A. Rebinder and A. B. Taubman for their interest in this work and for valuable advice. There are 1 figure and 6 ref.

Card 2/3

5(4)

SOV/20-124-4-34/67

AUTHORS: Aleynikov, N. A., Makarova, A. M.

TITLE: The Formation and Properties of Metallic Soaps in Diluted Aqueous Solutions (Obrazovaniye i svoystva metallicheskih myl v razbavlennykh vodnykh rastvorakh)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 124, Nr 4, pp 852-854 (USSR)

ABSTRACT: Reference is first made to several earlier papers dealing with this subject. The production of metallic soaps of the polyvalent cations may be represented as a function of the pH-value of the aqueous solutions as the process of the simultaneous formation of "acid" and "basic" soaps. The acid soaps are formed in the case of a low degree of hydrolytic decay of the salt of the polyvalent cation; their composition varies with decreasing pH-value of soaps with complete stoichiometrical substitution up to their molecular decay by way of soaps in which there are different degrees of penetration of H^+ into their mycelium or polymeric complexes. Here it is possible to assume, besides an ion-exchange, also a molecular mechanism, which is connected with the adsorption of palmitic acid on the mycelium of the "basic"

Card 1/3

TOPCHIEVA, K.V.; DANILOVA, N.A.; MAKAROVA, A.M.

Investigating the effect of high temperature and water vapor
on the structure and activity of magnesium silicate catalysts.
Azerb.khim.shur. no.2:85-91 '59. (MIRA 13:6)
(Magnesium silicate) (Catalysis)

MAKAROVA, Ariadna Leonidovna, dots, kand. ekon. nauk; STARCHAKOVA,
I.I., red.

[Determining marketing costs for commodity groups] Opredelenie izderzhkek obrashcheniia po tovarnym gruppam. Moskva, Ekonomika, 1964. 122 p. (MIRA 17:12)

1. Moskovskiy finansoviy institut (for Makarova).

L 45724-66

ACC NR: AP6024396

ene)phosphine oxide with sulfuric acid in acetic anhydride produced a water-soluble product, tris(tert-butylsulferroconylene)phosphine oxide. Ferrocene derivatives with electron-acceptor substituents do not react with PCl_3 under the conditions of phosphorylation of ferrocene. Di- and tri-tert-butylferrocenes do not react with PCl_3 either, probably because of steric hindrance.

SUB CODE: 07/ SUBM DATE: 31Dec65/ ORIG REF: 007/ OTH REF: 004

Card 2/2 ULR

I 45724-66 EMT(m)/EPP(j) RM
ACC NR: AP6024396

SOURCE CODE: UR/0020/66/169/002/0351/0354

AUTHOR: Nesmeyanov, A. N. (Academician); Vil'chevskaya, V. D.; Makarova, A. I.

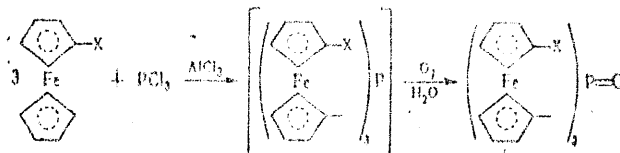
ORG: Institute of Organometallic Compounds, Academy of Sciences, USSR (Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR)

TITLE: Phosphorylation of ferrocene derivatives

SOURCE: AN SSSR. Doklady, v. 169, no. 2, 1966, 351-354

TOPIC TAGS: ferrocene, phosphorylation

ABSTRACT: The phosphorylation of ferrocene derivatives was carried out as follows:



where X is a substituent. The products were studied by thin-layer chromatography on alumina and by means of IR spectra. The following compounds were thus synthesized for the first time: (a) tris(o-carbomethoxybenzylferrocenylene)phosphine oxide (14% yield); (b) tris(tert-butylferrocenylene)phosphine oxide (53% yield); (c) tris(phenylferrocenylene)phosphine oxide (14% yield). Sulfonation of tris(tert-butylferrocenyl-

Card 1/2

UDC: 547.257.2

MAKAROVA, A.I.

Biogeochemical provinces rich in lead. Trudy Biogeokhim. lab. no.11:
215-220 '60. (MIRA 14:5)

1. Institut geokhimii i analiticheskoy khimii imeni V.I.Vernadskogo
AN SSSR.

(TRANSBAIKALIA---SOILS---LEAD CONTENT)
(ARMENIA---SOILS---LEAD CONTENT)

MAKAROVA, A.I.

Biogeochemical investigation of a polymetallic deposit.
Geokhimiia no.7:624-633 '60. (MIRA 13:11)

1. V.I. Vernadsky Institute of Geochemistry and Analytical
Chemistry, Academy of Sciences, U.S.S.R., Moscow.
(Akhtala Region--Geochemical prospecting)
(Soils--Lead content)
(Plants--Chemical composition)

MALYUGA, D.P.; NADIRADZE, V.R.; CHARGBYSHVILI, Ya.M.; MAKAROVA, A.I.

Biogeochemical prospecting in the high-mountain area of western
Georgia. Geokhimiia no.4:330-338 '60. (MIRA 13:10)

I. V.I. Vernadskiy Institute of Geochemistry and Analytical
Chemistry, Academy of Sciences, U.S.S.R., Moscow, and the
Geological Institute, Academy of Sciences of Georgia, Tbilisi.
(Adzhar A.S.S.R.--Geochemical prospecting)

Biogeochemical Studies in Kadzharan, Armyanskaya SSR SOV/7-59-5-4/14

crenate up to lobate petals were found in the Atkyz deposit. This may go so far that more than four petals seem to exist (Fig 4). On the strength of the map plotting (Fig 5) and the chemical analysis (Table 2) the authors assume that this phenomenon is caused by the lead- and zinc content. A change in the vascular fibrous bundle was detected as well in the changed specimens of the mentioned species (Fig 6). There are 6 figures, 2 tables, and 7 references, 5 of which are Soviet.

ASSOCIATION: Institut geokhimii i analiticheskoy khimii im. V. I. Vernadskogo AN SSSR, Moskva (Institute of Geochemistry and Analytical Chemistry imeni V. I. Vernadskiy AS USSR, Moscow)

SUBMITTED: April 8, 1959

Card 2/2

AUTHORS: Malyuga, D. P., Malashkina, N. S., SOV/7-59-5-4/14
Makarova, A. I.

TITLE: Biogeochemical Studies in Kadzharan, Armyanskaya SSR
 (Biogeokhimicheskiye issledovaniya v Kadzharane, Armyanskaya SSR)

PERIODICAL: Geokhimiya, 1959, Nr 5, pp 423 - 431 (USSR)

ABSTRACT: Several ecological characteristic features were found in the biogeochemical study of the Karmir-Karskiy ore district, at the right bank of the Okhchi river, and of the region of the Atkyz deposits. A geological (Fig 1) and a geobotanical map (Fig 2) show e.g. a distinctly marked dependence of the plant associations on the subsoil; the thyme-tragacanth associations are especially bound to monzonite, the bean-[miscellaneous] herbs to porphyrite. The molybdenum- and copper contents in Astragalus declinatus W., hypericum perforatum, Lapsana communis L., thyme-Transcaucasia, and Gold Astragalus were investigated (Table 1). The molybdenum content in Astragalus declinatus W. attains up to one tenth percent of the ash. Furthermore, specimens of Papaver commutatum F. et M. with enlarged black pigment spot on the petals (Fig 3). It is possible that this phenomenon is caused by the Cu- and Mo-content, this assumption is, however, not confirmed. Papaver macrostomum B. et H. with

Card 1/2

MALYUGA, D.P.; MAKAROVA, A.I.

Biogeochemical prospecting for ore deposits in Tuva Autonomous
Province. Geokhimiia no.1:106-112 '56. (MLRA 9:9)

1. Institut geokhimii i analiticheskoy khimii imeni V.I. Vernadskogo
AN SSSR, Moskva.

(Tuva Autonomous Province--Geochemical prospecting)

(Tuva Autonomous Province--Ore deposits)

MAKAROVA, A.I.

USSR/Soil Science - Physical and Chemical Properties of Soils. J-2

Abs Jour : Ref Zhur - Biol., No 2, 1958, 5768

Author : Malyuga, D.P., Makarova, A.I.

Inst : Academy of Sciences LatvSSR

Title : On the Question of the Microelement Content of the Soils
and Plants of Virgin Soils.

Orig Pub : Mikroelementy v s. kh. i v meditsine, Riga, Akad Nauk
LatvSSR, 1956, 485-495

Abstract : The content of microelements (Cu, Ni, Co, Mo, Pb, Zn, Cr, V, W, Be) in the soils of the virgin regions characteristic of the various defined geochemical oblast's of the Soviet Union are given. The soils of Aktyubinsk oblast' (chestnuts and ordinary solonchets) are very rich in Co, Ni, and Cu. In the soils of the Tuvinskaya autonomous oblast' (chernozems, mountain-forest, and dark chestnut),

Card 1/2

MAKAROVA, A.I.

✓ The content of microelements in several soils developed on ore deposits. D. P. Malyuga and A. I. Makarova. *Pochvenovedeniye* 1956, No. 1, 50-3. — The contents of the following elements are reported on chestnut-brown and other soils of the South-Ural Province (0-7 cm. deep) where ore prospecting is being carried out: Ni, 5.0×10^{-4} — $6.2 \times 10^{-4}\%$; Co, 2.0×10^{-4} — $4.8 \times 10^{-4}\%$; Cu, 2.0×10^{-4} — $3.3 \times 10^{-4}\%$. The av. content of Ni in the ash of plants grown in the area is 3.0×10^{-4} ; Co, 8.5×10^{-4} ; and Cu, $1.5 \times 10^{-4}\%$. The Cr content of soils and plants in areas of such ore deposits may reach several tenths of a %. This may account for the poor condition of the plants in that area. In other soils, in the depressions of the mountains where the ores are being prospected, 600 spectral detos. were made giving the following data: Co, 1.0×10^{-4} — 2.5×10^{-4} ; Ni, 5.0×10^{-4} — 3.0×10^{-3} ; Cu, 1.0×10^{-4} — 5.0×10^{-4} ; V, 5.0×10^{-4} — 2.0×10^{-3} ; Cr, 5.0×10^{-4} — 4.0×10^{-3} ; Pb traces — 5×10^{-4} ; W, traces — 1×10^{-4} ; Zn, traces — 5×10^{-3} ; Be, traces — $1.0 \times 10^{-4}\%$. Data are also given on the microelements in 3 springs and 2 rivers: Be, Pb, Co, Ni, Zn, Cu, Sr, Ba, Mn, Fe, and Si. The high Zn, Pb, Sr, and Ba in these waters may be assocd. with the *wroo* disease in the region. I. B. Joffe.

(2)

MAKAROVA, A. I.

✓ Distribution of small amounts of nickel, cobalt, and copper in the clays of the Russian platform. A. B. Rozen, D. P. Malyshe, and A. I. Makarova. *Doklady Akad. Nauk S.S.S.R.* 103, 120-22 (1955). The polarographic determination of traces of Ni, Co, and Cu in 8166 single samples taken from 117 av. samples of bore-hole cores from the oldest (blue rift) horizons to the recent Quaternary clay sediments of Central Russia gave excellent results for an accurate percentage of Co ($1.1 \times 10^{-4}\%$), Ni ($2.2 \times 10^{-4}\%$), and Cu ($3.5 \times 10^{-4}\%$). For the ratio Ni:Co variations were observed in the range between 0.7 and 3.8:1, with an av. max. of 2.0:1. Somewhat unexpected is the low Ni:Co ratio (1:1) in the oldest clay sediments which is explained by the intense erosion of granitoids in these geol. periods, i.e. of rocks

contg. Ni and Co with such a low ratio. In general, the rule is established that Ni and Co in clay sediments are derived from basic and ultrabasic plutonics and Cu is derived from basic effusive magmatic rocks. Another general tendency for the distribution of these elements is the decrease in the abs. amts. from the oldest geol. periods to the Quaternary. It is particularly evident for Cu, Mg, and Fe. These facts were explained by a theory of Strakhov that the intensity of ore deposition is progressively decreasing in the history of the earth. W. Bittel

Inst. Geochem. & Analyt. Chem.
 (2) in V. I. Vernadsky, AS USSR

MAKAROVA, A. I.

USSR/ Biology - Geochemistry

Card 1/1 Pub. 22 - 30/47

Authors : Malyuga, D. P., and Makarova, A. I.

Title : On the cobalt content in the soil and plants of the Tuva region

Periodical : Dok. AN SSSR 98/5, 811-813, Oct 11, 1954

Abstract : Data on the cobalt contents found in the soil and plants above Co-ore deposits in the Tuva Autonomous region of the USSR are presented. The effect of Co on animal and plant life was also investigated. Eleven USSR references (1939-1954). Table; graph.

Institution : Acad. of Sc. USSR, The V. I. Vernadskiy Institute of Geochemistry and Analytical Chemistry

Presented by : Academician A. P. Vinogradov, August 3, 1954

MAKAROVA, A. I.

Determination of zinc in soil by the dithizone method.
 E. V. Arinushkina and A. I. Makarova. *Vestnik Moskov. Univ.* 8, No. 5, Ser. Fiz.-Mat. i Estestven. Nauk No. 2, 115-20 (1953).—Zn is detd. in soil by extrn. with 0.003% dithizone in CCl_4 . Soil is first fused with 6 parts of "carbonates," and sesquioxides are pptd. by the acetate method. Two or three preliminary extrns. in dil. HCl with 5 ml. dithizone soln., remove impurities (especially Cu). For final extrn. of Zn, 17% $\text{Na}_2\text{S}_2\text{O}_3$ is present to mask Pb, Co, etc. The soln. is made alk. to methyl orange with 5% Na acetate (0.2 ml. excess) to give a pH of 4.5. Ten to 20 ml. of soln. (representing 0.5-1.0 g. of soil) is extd. 1 min. each with 5 ml. and 2 ml. of dithizone soln. Five ml. 1:200 NH_4OH is added to remove excess dithizone. Comparison (apparently visual or by colorimeter only) is made with standards representing 1-10 γ Zn per ml. For water-sol. Zn, 50 g. soil is extd. with 5 parts purified twice-distd. H_2O for 1 hr. Dried residue is decompd. with H_2O_2 and dissolved in dil. HCl. The soln. is extd. as above. Sensitivity is said to be 0.1 γ Zn per ml. CCl_4 is purified both by distn. and by extrn. with dil. NH_4OH and dil. HCl. Distd. H_2O is purified by extrn. with dithizone soln. Results agree with previous work of Vinogradov. A. W. Daly

③ - Chem Soil Science

MAKAROVA, A. I.

Study of muscle sense in connection with sports. Trudy LSQMI 64:
191-203 '61. (MIRA 15:7)

1. Kafedra fizicheskogo vospitaniya i vrachebnogo kontrolya
Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo insti-
tuta. Zav. kafedroy - dotsent M. I. Bogachev.

(MUSCULAR SENSE) (SPORTS—PHYSIOLOGICAL ASPECTS)

MAKAROVA, A. I.

MAKAROVA, A. I.: "On muscular weakening in sportsmen". Leningrad, 1955. Min. Health USSR. Leningrad Sanitary-Hygienic Medical Inst. (Dissertations for the degree of Candidate of Medical Science.)

SO: Knizhnaya Letopis' No. 50 10 December 1955. Moscow.

MAKAROVA, A.G.

Titration of the components of complement fixation reaction
with Florinski's apparatus. Veterinariia 38 no.11:79-80
N 161 (MIRA 18:1)

1. Stavropol'skaya krayevaya veterinarno-bakteriologicheskaya
laboratoriya.

YANUSHKEVICH, N.I.; MAKAROVA, A.G. (Odessa)

Clinical aspects and pathogenesis of dissecting aortic aneurysm.
Vrach. delo no.6:140-142 Je '61. (MLRA 15:1)

1. Terapevticheskoye otdeleniye (zaveduyushchiy - N.I. Yanushkevich,
nauchnyy rukovoditel' - zasluzhennyy deyatel' nauki, prof. M.A.
Yasinovskiy) Odesskoy basseynovoy bol'nitsy moryakov.
(AORTIC ANEURYSMS)

MAKAROVA, A.G.

Autopsy data on acute erythematosis. Vest. derm. i ven. 33 no.2:
22-25 Mr-Apr '59. (MIRA 12:7)

1. Iz kafedry kozhnykh i venericheskikh bolezney (zav. - prof. A.I.
Kartamyshev) Tsentral'nogo instituta usovershenstvovaniya vrachev
(dir.V.P. Lebedeva).

(LUPUS ERYTHEMATOSUS, DISSEMINATED, pathol.
autopsy (Rus))

MAKAROVA, A. F.

MAKAROVA, A. F.: "A comparative evaluation of certain methods of preparing soils for mechanical and microaggregate analysis". Moscow, 1955. Moscow Order of Lenin State U imeni M. V. Lomonosov, Soil-Biology Faculty, Chair of Physics and Reclamation of Soil. (Dissertations for the degree of Candidate of Biological Sciences.)

SO: Knizhnaya Letopis' No. 50 10 December 1955. Moscow

Comparison of the pipette and ultracentrifuge methods for mechanical analysis of soil. A. G. HARRISON and E. N. HARRIS. *Proceedings*, 1953, No. 2, 45-46. The ultracentrifuge method indicated a coarser structure of the soil than did the pipette method and showed the proportion in which the fractions occurred. With 10 g. samples the ultracentrifuge method gave accurate results for the fraction 0.06-0.01 mm., but not for the clay fraction. With a 50 g. sample the accuracy for the clay fraction was increased, but lowered for the coarse fractions. HARRIS & HARRISON (A. G. H.).

A comparative evaluation of methods for the preparation of soils for microaggregate analysis. A. F. Makarov. *Phytology* (U. S. S. R.) 1939, No. 5, 105-26. *Khim. Referat. Zhur.* 1939, No. 11, 49. Comparison of various methods shows that the optimum conditions for the prepn. of soils for analysis are: shake the soil sample for 2 hrs. in a shaking app., soak for 24 hrs., take air-dry samples for shaking app., take aq. infusions of the soil for the analyses the analyses, take aq. infusions of the soil for the analyses of saline and solonetz soils (for the chernozem and podzol soils distd. water may also be used). The use of salt soils is not recommended. W. R. Henn

MAKAROVA, A.F.; CHAGOVETS, N.R.

Effect of vitamin-E enriched feed rations on biochemical changes in
working muscles. Ukr. biokhim. zhur. 32 no.4:560-565 '60.
(MIRA 13:9)

1. Sektor biokhimii Leningradskogo nauchno-issledovatel'skogo instituta
fizicheskoy kul'tury.
(TOCOPHEROL) (MUSCLE)

YAKOVLEV, N.N.; YEREMENKO, N.P.; LESHKEVICH, A.G.; MAKAROVA, A.F.; POPOVA, N.K.

Development of strength, speed of motion, and endurance in sports
training of different types. Fiziol.zhur. 45 no.12:1422-1429 D '59.
(MIRA 13:4)

1. From the Department of Physiology and Biochemistry, Research
Institute for Physical Culture, Leningrad.
(SPORTS)

MAKAROVA, A.F., CHAGOVETS, N.R., SHAMRAY, YE.F., MARKOSYAN, A.A., FROL'KIS, V.V.

"Determining the vitamin requirements of athletes and their utilization for increasing athletic work capacity."

Report submitted for the 13th Intl. Congress of Sports Medicine
M^Oscow July-Aug 1961

YAKOVLEV, N.N.; LESHKEVICH, L.G.; MAKAROVA, A.F.; POPOVA, N.K.;
ROGOZKIN, V.A.; CHAGOVETS, N.R.

Age peculiarities in the body's reaction to physical exercise.
Fiziol. Zhur. 46 no. 7:834-841 J1 '60. (MIRA 13:8)

1. From the Research Institute of Physical Culture, Leningrad.
(EXERCISE)

YAKOVLEV, N.N.; LESHKEVICH, L.G.; MAKAROVA, A.F.; POPOVA, N.K.

Comparative biochemical characteristics of different muscles
in cats and rabbits. Ukr.biokhim.zhur. 31 no.1:75-88 '59.
(MIRA 12:6)

1. Section of Biochemistry of the Research Institute of
Physical Culture, Leningrad.
(MUSCLES)

MAKAROVA. A.F.

Biochemical changes in the muscles of animals followeing different types of experimental "training" [with summary in English]. Ukr. biokhim.zhur. 30 no.6:903-910 '58. (MIRA 11:12)

1. Sektor fiziologii i biokhimii nauchno-issledovatel'skogo instituta fizicheskoy kul'tury, Leningrad.
(EXERCISE) (MUSCLE)

MAKAROVA, A.I.

Biochemical aspects of weight-lifting exercises. Ukr.biokhim.zhur.
30 no.3:368-377 '58. (MIRA 13:3)

1. Section of Physiology and Biochemistry of the Research Institute
of Physical Culture, Leningrad.
(WEIGHT LIFTING) (BLOOD--ANALYSIS AND CHEMISTRY)

COUNTRY : USSR
CATEGORY :

T

ISS. JOUR. : Vopr. Biol., No. 5 1959, No. 22380

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : erable increase in the ATP-ase activity of myosin in the face of short-term work and the maintenance of normal levels during prolonged fatiguing exercise. Injecting the animals with acetylcholine slightly increased ATP-ase activity in resting muscles and led to a considerable increase during work. Glutamic acid increased the ATP-ase activity only in exhaustion. Phenamine increased the myosin ATP-ase activity only during work. It is suggested that there is an association between the functional lability of myosin ATP-ase activity and acetylcholine metabolism.--F.I. Mumladze

Card: 2/2

T

MAKAROVA, A. F.

COUNTRY : USSR

CATEGORY : Human and Animal Physiology, Neuromuscular Physiol.

RES. JOUR. : RZhBiol., No. 5 1959, No. 22360

AUTHOR : Makarova, A. F.

INST. : _____

TITLE : The Effect of Different Types of Muscular Activity
on the Adenosinetriphosphatase Activity of Myosin

ORIG. PUB. : Ukr. biokhim. zh., 1958, 30, No. 2, 230--239

ABSTRACT : The ATP-ase activity, calculated per mg of
myosin nitrogen, of rats which had swum for
30 minutes, increased 21% on the average as
compared with its value in control animals.
Suspending the animals on a vertical rod for 15
minute also led to a reduction in the ATP-ase
activity of myosin by an average value of 20%.
Changes in ATP-ase activity are a means of
altering, not the amount of myosin, but its
chemical or physicochemical properties. Prior
"experimental training" brought about a consid-
1/2

Card:

T-72

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031500035-6

ARZFANYKH, I.S., otv. red.; SHAFEYeva, K.A., red.; MAKAROVA, A.A.,
red.; KARABAYEVA, Kh.U., tekhn. red.

[Studies on differential equations] Issledovaniia po dif-
ferentsial'nym uravneniiam. Tashkent, Izd-vo AN Uzb.SSR,
1963. 204 p. (MIRA 16:11)

1. Akademiya nauk Uzbekskoy SSR. Tashkent. Institut mate-
matiki. 2. Chlen-korrespondent AN Uzb.SSR (for Arzhanykh).
(Differential equations)

MARKMAN, A.L., doktor khim. nauk, otv. red.; SOKOLOVA, A.A., red.;
MAKANOVA, A.A., red.; KARABAYEVA, Kh.U., tekhn. red.

[Studying mineral and plant resources of Uzbekistan] Issledovanie mineral'nogo i rastitel'nogo syr'ia Uzbekistana. Tashkent, Izd-vo Akad. nauk UzSSR, 1962. 228 p. (MIRA 15:11)

1. Akademiya nauk Uzbekskoy SSR, Tashkent. Institut khimii.
(Uzbekistan--Mines and mineral resources)
(Uzbekistan--Botany, Economic)

AVAK'YANTS, G.M., doktor fiziko-matem. nauk, prof., otv. red.;
KISELEVA, V.N., red.; BAKLITSKAYA, A.V., red.;
MAKAROVA, A.A., red.; KARABAYEVA, Kh.U., tekhn. red.

[Electron-hole junctions in semiconductors] Elektronno-
dyrochnye perekhody v poluprovodnikakh. Tashkent, Izd-
vo Akad. nauk Uzbekskoi SSR, 1962. 320 p.

(MIRA 16:3)

(Semiconductors) (Transistors)

KUSHKIY, R.O., kand. med. nauk; MINIOVICH, M.M.; MAKAROVA, A.A. (Moskva)

Changes in the ocular fundus in rheumatism. Klin. med. 37 no.5:
38-41 My '59. (MIRA 12:8)

1. Iz terapevticheskoy kliniki (rukovoditel' - prof. P.L. Sukhinin)
Moskovskogo gorodskogo nauchno-issledovatel'skogo instituta skoroy
pomoshchi imeni Sklifosovskogo (dir. - zasluzhennyy vrach USSR M.M.
Tarasov).

(RHEUMATISM, pathol.
ocular fundus (Rus))
(EYE, pathol.
fundus in rheum. (Rus))

FILATOV, Aleksandr Nikolayevich; ARZHANYKH, I.S., otv. red.;
MAKAROVA, A., red.; SHAFEYEVA, K.A., red.; GOR'KOVAYA,
Z.P., tekhn. red.

[Generalized Lie series and their application] Obob-
shchennyye riady Li i ikh prilozheniya. Tashkent, Izd-vo
AN Uzb.SSR, 1963. 105 p. (MIRA 16:7)
(Series)

L 42968-66

ACC NR: AR6024994

ethyl ether, followed by 40 ml of a 50% solution of benzylamine in absolute ether.
 Forty-three grams of the complex $C_6H_8[OB(OC_3H_7)_2]_6 \cdot 6NH_2CH_2C_6H_5$ is obtained. Bibliogra-
 phy of 4 titles. I. D. [Translation of abstract] /

SUB CODE: 07/ le

Card 2/2 90

L 42968-66 EWT(m)/EWP(j) WW/JW/RM SOURCE CODE: UR/0081/66/000/007/NO19/NO19
 ACC NR: AR6024994 38
 37
 B

AUTHOR: Gertsev, V. V.; Makarov-Zemlyanskiy, Ya. Ya.

TITLE: Complexing of mixed boric esters of carbohydrates and simple alcohols with amines

SOURCE: Ref. zh. Khimiya, Part II, Abs. 7N129

REF SOURCE: Nauchn. tr. Mosk. tekhnol. in-t legkoy prom-sti, vyp. 31, 1965, 297-299

TOPIC TAGS: carbohydrate, organoboron compound, amine

ABSTRACT: The reaction of transesterification of boric esters of simple alcohols with carbohydrates forms polyboric esters of carbohydrates. The reaction takes place via a stage of formation of mixed boric esters of carbohydrates and simple alcohols which do not crystallize and do not distill under vacuum, and, when the temperature of the reaction medium is raised, disproportionate to form polyboric esters of carbohydrates. The separation of mixed boric esters of carbohydrates and simple alcohols, where disproportionation was prevented by complexing with amines (benzylamine, diethylamine), was studied. The precipitation of amine complexes of these esters takes place readily from a medium of ethyl or petroleum ether in the form of a white precipitate; there is one amine molecule per B atom chemically bound by the C-O-B ether bond to a carbohydrate group. Five grams of mannitol and 58 ml of $B(OC_2H_5)_3$ are placed in a flask. To the mannitol polyborate obtained are added 60 ml of $B(OCH_3)_3$ and 50 ml of absolute

Card 1/2

GERTSEV, V.V.; MAKAROV-ZEMLYANSKIY, Ya.Ya.

Synthesis and study of carbohydrate polyborates. Vysokom.sped. 6 no.8:
1458-1462 Ag '64. (MIRA 17:10)

1. Moskovskiy tekhnologicheskiy institut legkoy promyshlennosti.

KALYAVKIN, V.V., aspirant; HAZAROV-SEMLYANDNIY, Ya.Ya., doktor Khim. nauk, prof.

Synthesis of the boric acid esters of monosaccharides by means of
re-esterification. Dokl. Akad. Nauk SSSR no. 244-71 '60. (RUS 17:11)

1. Kafedra organicheskoy khimii Moskovskogo tekhnologicheskogo
instituta legkoy promyshlennosti.

BOKOV, Yu.S., mladshiy nauchnyy sotrudnik; MAKAROV-ZEMLYANSKIY, Ya.Ya.,
doktor khim. nauk, prof.

Acetylation of xylotrihydroxy glutaric acid. Nauch. trudy
MTILP no.26:81-85 '62. (MIRA 17:5)

MALYAVKIN, V.V., aspirant; MAKAROV-ZEMLYANSKIY, Ya.Ya., doktor
khimicheskikh nauk, prof.

Borates in the chemistry of polyhydroxy compounds. Nauch.
trudy MTILP no.26:27-34 '62. (MIRA 17:5)

1. Kafedra organicheskoy khimii Moskovskogo tekhnologicheskogo
instituta legkoy promyshlennosti.

BOKOV, Yu.S., mladshiy nauchnyy sotrudnik; MAKAROV-ZEMLYANSKIY, B.Ya.,
assistant; MAKAROV-ZEMLYANSKIY, Ya.Ya., doktor khim. nauk, prof.;
PAVLON, S.A., doktor tekhn. nauk, prof.

Obtaining mixed polyamides with the use of trihydroxyglutaric
acid. Nauch. trudy MTILP no.24:40-46 '62. (MIRA 16:7)

1. Nauchno-issledovatel'skaya laboratoriya po polucheniyu
iskusstvennoy kozhi i plenochnykh materialov.
(Polyamides) (Glutaric acid)
(Leather, Artificial)

MAKAROV-ZEMLYANSKIY, Ya.Ya., doktor khim. nauk, prof.; MALYAVKIN, V.V.,
~~aspirant~~

New developments in the synthesis of boroacetate. Nauch.
trudy MTILP no.24:46-49 '62. (MIRA 16:7)

1. Kafedra organicheskoy khimii Moskovskogo tekhnologicheskogo
instituta legkoy promyshlennosti.
(Boron oxides) (Acetic anhydride)
(Chemistry, Organic--Synthesis)

BOKOV, Yu.S., mladshiy nauchnyy sotrudnik; MAKAROV-ZEMLYANSKIY, B.Ya.,
assistant; MAKAROV-ZEMLYANSKIY, Ya.Ya., doktor khimicheskikh
nauk, prof.; PAVLOV, S.A., doktor tekhn. nauk, prof.

Interphase polycondensation of acetylated trihydroxyglutaric
acid and hexamethylenediamine. Nauch. trudy MTILP no.24:
30-39 '62. (MIRA 16:7)

1. Nauchno-issledovatel'skaya laboratoriya po polucheniyu
isskustvennoy kozhi i plenochnykh materialov Moskovskogo
tekhnologicheskogo instituta legkoy promyshlennosti.
(Glutaric acid) (Hexandiamine)
(Condensation products (Chemistry))

MAKAROV-ZEMLYANSKIY, Ya.Ya., doktor khimicheskikh nauk, prof.; MAKAROV-
ZEMLYANSKIY, B.Ya., kand.tekhn.nauk, assistant

Production of xylotrihydroxyglutaric acid derivatives. Report No.1:
Acetylation of xylotrihydroxyglutaric acid. Nauch.trudy MTILP
no.23:44-48 '61. (MIRA 15:9)

1. Kafedra organicheskoy khimii Moskovskogo tekhnologicheskogo
instituta legkoy promyshlennosti.
(Glutaric acid) (Acylation)

Polycondensation of...

S/081/62/000/023/096/120
B101/B186

combination of the resulting resin with the Ak60/40 (AK60/40)-type PA in alcoholic solution was examined. Even small quantities of the resin were found to increase the hygroscopicity and the capability of swelling in water (by 10-30%), and the strength of films. [Abstracter's note: Complete translation.]

Card 2/2

S/081/62/000/023/096/120
B101/B186

AUTHORS: Makarov-Zemlyanskiy, B. Ya., Bokov, Yu. S., Makarov-
Zemlyanskiy, Ya. Ya., Pavlov, S. A.

TITLE: Polycondensation of xylotrihydroxy glutaric acid with
hexamethylene diamine

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 23, 1962, 681, abstract
23P118 (Nauchn. tr. Mosk. tekhnol. in-t legkoy prom-sti,
no. 23, 1961, 35 - 43)

TEXT: The polycondensation of the salt of trihydroxy glutaric acid and
hexamethylene diamine was studied at high temperatures in the melt
(165 - 200°C, in the atmosphere of purified N₂) and using solvents
(tricresol and xylenol) at 170 and 180°C. The kinetic curves for the
polycondensation were plotted. The rate of formation of the linear
polyamide (PA) was shown to be lower than that of a three-dimensional
compound through interaction of the hydroxyl groups of neighboring chains.
The resulting PA (molecular weight 950) was found to be unusable as
film-forming agent for artificial leather. The possibility of a
Card 1/2

Production of fireproof...

29043
S/081/61/000/018/023/027
B101/B147

CH_3COOH , concentrated H_2SO_4 , in mixtures of CH_3OH and CHCl_3 , or $\text{C}_2\text{H}_5\text{OH}$ and CHCl_3 in ratios of 60 : 40 and 50 : 50. It is insoluble in CCl_4 and weakly soluble in CHCl_3 , dichloro ethane, etc. CSP displays great adhesion to glass, metal, and wood. Films obtained from solutions of CSP in HCOOH or mixtures of alcohols and CHCl_3 are brittle and unstable.

[Abstracter's note: Complete translation]

X

Card 2/2

15 8080

29043
S/081/61/000/018/023/027
B101/B147

AUTHORS: Prokhorov, L. I., Makarov-Zemlyanskiy, Ya. Ya.

TITLE: Production of fireproof polyamides

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 18, 1961, 522, abstract
18P39 (Nauchn. tr. Mosk. tekhnol. in-t legkoy prom-sti,
no. 17, 1960, 35 - 41)

TEXT: A chlorine-substituted polyamide (CSP) was obtained from the dichloride of dichloro adipic acid (I) and from hexamethylene diamine (II) by polycondensation at the interface benzene - water. For this purpose, 100 milliliters of II dissolved in alkali were added dropwise to 100 milliliters of I dissolved in benzene while intermixing rapidly. Intermixing was continued for 10 - 12 min at about 20°C. The resulting CSP was filtered off, washed with acetone and hot water, and dried in vacuo. A study of the effect of the concentration of the initial solutions on the yield of CSP has shown that the highest yield (52.9%) is obtained at a concentration of 0.20 mole/liter. CSP softens at 80 - 100°C, melts at 197 - 203°C, is readily soluble in benzyl alcohol and cresol, soluble in HCOOH,

Card 1/2

MAKAROV-ZENLYANSKIY, Ya.Ya.; FEL'DMAN, R.I.; RYUTOV, O.S.; GOLDOVSKIY,
Ye.A.

Chitosan as a substitute for food products and rubber. Leg.
prom. 18 no.6:28-30 Je '58. (MIRA 12:10)
(Chitin) (Leather substitutes)

MAKAROV-ZEMLYANSKIY, Ya. Ya.
 USSR/Physical Chemistry. Crystals. B-5

Abs Jour: Ref Zhur-Khimiya, No 5, 1957, 14470

Author : Ya. Ya. Makarov-Zemlyanskiy
 Inst : Moscow Technological Institute of Light Industry
 Title : New data on the properties and structure of crystalline boric acid

Orig Pub: Nauch. tr. Mosk. tekhnol. in-ta legkoy prom-sti, 1956, sb. 6, 269-274

Abstract: It has been determined that in heating of H_3BO_3 with terpenes of peppermint oil or benzol at a temp. of $\sim 80^\circ$ there occurs a splitting off of water. The author assumes that in the crystalline H_3BO_3 there exists a mesomerism between the earlier described form (Zachariasen W., Z. Krystallogr., 1931, 88, 150) and the second form which contains the HBO_2 and H_2O molecules which are connected by hydrogen bonds. By such a mesomerism the easy splitting off of water is explained.

Card 1/1

10

CA

The action of acetylated ethylene chlorohydrins on benzene in the presence of aluminum chloride. Ya. Ya. Makarov-Zemlyanskii, V. V. Korshak and S. V. Savenkov. *J. Gen. Chem.* (U. S. S. R.) 11, 331-4 (1941).—When $\text{ClCH}_2\text{CH}_2\text{OAc}$ reacts with C_6H_6 and AlCl_3 , the products are biphenyl (I) and PhCOMe . Under the same conditions, bis(2-chloroethyl) oxalate, in 132°, gives only I and PhCOMe , while $p\text{-NO}_2\text{C}_6\text{H}_4\text{CO}_2\text{CH}_2\text{CH}_2\text{Cl}$ reacts only enough to give traces of I. H. M. Friedman

ASAC-SLA METALLURGICAL LITERATURE CLASSIFICATION

Preparation of methylethylaniline. Ya. Ya. Makarov, Zemtsovskii, S. F. Filatov and V. S. Vilenkin. *Applied Chem.* (U.S.S.R.) 10, 600-70 (1937). (a) Me_2SO , (318 g.) was added by drops to the soln. of PhNHMe (204, NaOH 252 g. and water 375 cc., while keeping the temp. always below 5° , with const. stirring. The stirring was continued for 1 hr. after all the Me_2SO had been added, and the resulting soln. was treated with 200 cc. of 40% NaOH. PhNHMe (I) was extd. with Et_2O (4 times) and dried over NaOH (solid). After 12 hrs., the Et_2O was distd. off and I was fractionated. The yield of I b/200- 4° was 160 g. (70%). (b) $\text{Me}_2\text{C}_2\text{H}_4\text{SO}_2$ (II) was added in small portions with const. stirring to the mixt. of PhNHMe 10.3 g. in a soln. of NaOH 8 g. in 12 cc. of water preheated to 80° . After the addn. of II, the mixt. was kept at 80° for 1 hr., then the resulting mixt. was treated with 20 cc. of 20% NaOH, and cooled. I was extd. with Et_2O . The yield of I, b. 200- 4° , was 85.09% (theory). (c) The mixt. of PhNHMe 193, MeOH 54.8, (theory). H_2SO_4 7.36 g. was heated in a rotating steel autoclave for 13 $\frac{1}{2}$ hrs. at $170-180^\circ$ and finally at 210° for 2 hrs. Then, the excess of MeOH was distd. off and the mixt. of secondary and tertiary amines was steam-distd., extd. with Et_2O and dried over solid NaOH, yielding I, b. 183- 201° , (10 g.) and the mixt. heated gradually (10 hrs.) from 183° to 201° ; in this case the yields were 88.78 and 0.72%, resp. (d) PhNHMe 107, MeOH 54.8 and Me_2SO , 11.3 g. were treated as in (c) heated for 0.5 hrs. at 180°

for 3 hrs. at $180-5^\circ$, and for 3 hrs. at 210° , yielding 184.0 and PhNHMe 0.5%. For identification of the I obtained, its picrate was prepd.; it formed light yellow rhombic crystals, m. $141-3^\circ$ (after several recrystals.). Kametani (*C.* 4, 7, 1020) and Singh (*C.* A. 11, 1340) gave the m. p. of this picrate as $121-2^\circ$ and $134-5^\circ$, resp., but the ultimate analysis of the picrate obtained proved that the picrate of I was m. $141-3^\circ$. The content of I in the mixt. of amines was detd. by transforming it into $p\text{-NO}_2\text{C}_6\text{H}_4\text{N}(\text{Me})$, m. 67° , by the usual method (keeping the temp. below 4°), with a yield of 94% (theory). Twenty-eight references. A. A. Podornov

Ca

Nitration of tetralin. Ya. Ya. Maksimov-Zamiatyanskiy and V. P. Bibishev. *J. Gen. Chem.* (U. S. S. R.) 7, 1280 (1937). A yield of 80% of mixed 1,2- (I) and 1,3-dinitro-tetralin (II) resulted when 26.4 g. of conc. tetralin, b. 205-7°, was introduced (in 30 min.) into 90 cc. HNO_3 , d 1.35, at 0-14° and then poured on ice. The mixed nitro-tetralins formed a light oil, which rapidly crystd. on stand- ing. The advantages of this procedure are that it elim- inates resinification and formation of a viscous mass of nitro- products difficult to separate. The separation of the 2 isomers is effected by dissolving the mixt. in concd. H_2SO_4 at 60-70° and allowing to cool. At 5-10° I, m. 101-2°, is sep'd and II, m. 92-3.5°, is ppt'd from the filtrate on addn. of H_2O . (Chas. Blum)

Preparation of benzaldehyde from benzal chloride and boric acid. Ya. Ya. Makarov-Zemlyakov and B. S. Prokin. *J. Appl. Chem.* (U. S. S. R.), 9, 2307-9 (in French 2309) (1956).— PhCHCl_2 (161 g.) was treated with H_3BO_3 (74 g.) in a flask provided with a reflux condenser, connected with 2 flasks, one of which was charged with H_2SO_4 (conc'd.), at 120° , increasing the temp. to 190° at the end of the reaction, for 4 hrs. The H_2 formed (65%) was ext'd. with PhMe and ppt'd. as $\text{PhCH}(\text{OH})\text{BO}_2\text{Na}$ in the usual manner. PhCHCl_2 does not react with H_2O_2 . Therefore, PhCHCl_2 can be rep'd. from its technical mixt. with PhCH_2Cl and PhCCl_3 by the above method, with a good yield of B_2H_6 , HBO_2 and HCl . A. A. Podgorny

COMMON ELEMENTS		1ST AND 2ND ORDERS		PROCESSES AND PROPERTIES INDEX		3RD AND 4TH ORDERS	
<p>Catalytic production of camphor from borneol. P. P. SHORDIGIN AND YA. MAKAROV-ZHIMELTANREY. <i>Zhur. Prikladnoi Khim.</i> 4, 69-75(1931).—Borneol is oxidized to camphor by contacting with V_2O_5 at 300° a mixt. of its vapors, $C_{10}H_{18}$, H_2O and air. The yield is 40% (or 80% theoretical as 80% borneol is recovered unchanged). Camphene appears as a by-product if the optimum conditions of the reaction are not observed. Active V_2O_5 catalyst is prepd. by igniting 235 g. NH_4 vanadate (Kahlbaum) in an Fe crucible until no more NH_3 is evolved; 335 g. of molten NaOH is then added while stirring the mixt. with an Fe rod, 80 g. saltpeter is then introduced and heating continued for 0.5 hr. with const. stirring. On cooling, the mass is extd. with hot water, filtered and the filtrate dild. to 6 l.; 680 cc. HCl (d. 1.19) is added to it and the ppt. formed is washed repeatedly by decantation with hot water until the washings give no ppt. with $AgNO_3$. The residue is transferred into a porcelain dish and heated with fuming HNO_3 on a water bath. The catalyst is mixed with water and then with pumice, dried and ignited. It can be regenerated by heating on a water bath with a mixt. of concd. HNO_3 and HCl. If borneol vapors are passed with C_2H_4 over finely divided metallic Cu or bronze at 255°, H splits off and 86-8% of camphor is obtained (12-13% of unchanged borneol is recovered). Exptl. technic is described. V. K.</p>							
<p>ASS-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>							
<p>1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300 2400 2500 2600 2700 2800 2900 3000 3100 3200 3300 3400 3500 3600 3700 3800 3900 4000 4100 4200 4300 4400 4500 4600 4700 4800 4900 5000 5100 5200 5300 5400 5500 5600 5700 5800 5900 6000 6100 6200 6300 6400 6500 6600 6700 6800 6900 7000 7100 7200 7300 7400 7500 7600 7700 7800 7900 8000 8100 8200 8300 8400 8500 8600 8700 8800 8900 9000 9100 9200 9300 9400 9500 9600 9700 9800 9900</p>							

Benzaldehyde. YA. YA. MAKAROV-ZEMLYANSKH and S. S. PROKIN. Russ. 23,390, Oct. 31, 1931. PhCHCl_2 is heated with H_3BO_3 or $\text{Na}_2\text{B}_4\text{O}_7$ in the presence or absence of copper powder.

ASMSLA METALLURGICAL LITERATURE CLASSIFICATION

LIST AND PREPARE																										PROCESSING AND PREPARE INDEX																									
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<p>✓</p> <p>Tribornyl borate and its use in separation of borneol from camphor. B. P. SHORUT- GIN AND YA. MAKAROV-ZEMLYANSKII. <i>J. Russ. Phys. Chem. Soc.</i> 62, 2047 (1930). Borneol is converted almost quantitatively into tribornyl borate by the action of C_6H_6 or xylene and boric acid. A method for sepg. borneol from camphor is based on this reaction. B. C. A.</p>																																																			
<p>ASD-5LA METALLURGICAL LITERATURE CLASSIFICATION</p>																																																			

BOKOV, Yu.S., mladshiy nauchnyy sotrudnik; MAKAROV-ZEMLYANSKIY, B.Ya.,
assistent; MAKAROV-ZEMLYANSKIY, Ya.Ya., doktor khim. nauk, prof.;
PAVLOV, S.A., doktor tekhn. nauk, prof.

Obtaining mixed polyamides with the use of trihydroxyglutaric
acid. Nauch. trudy MTILP no.24:40-46 '62. (MIRA 16:7)

1. Nauchno-issledovatel'skaya laboratoriya po polucheniyu
iskusstvennoy kozhi i plenochnykh materialov.
(Polyamides) (Glutaric acid)
(Leather, Artificial)

BOKOV, Yu.S., mladshiy nauchnyy sotrudnik; MAKAROV-ZEMLYANSKIY, B.Ya., assistant; MAKAROV-ZEMLYANSKIY, Ya.Ya., doktor khimicheskikh nauk, prof.; PAVLOV, S.A., doktor tekhn. nauk, prof.

Interphase polycondensation of acetylated trihydroxyglutaric acid and hexamethylenediamine. Nauch. trudy MTILP no.24: 30-39 '62. (MIRA 16:7)

1. Nauchno-issledovatel'skaya laboratoriya po polucheniyu isskustvennoy kozhi i plenochnykh materialov Moskovskogo tekhnologicheskogo instituta legkoy promyshlennosti.
(Glutaric acid) (Hexandiamine)
(Condensation products (Chemistry))

Polycondensation of...

S/081/62/000/023/096/120
B101/B186

combination of the resulting resin with the Ak60/40 (AK60/40)-type PA in alcoholic solution was examined. Even small quantities of the resin were found to increase the hygroscopicity and the capability of swelling in water (by 10-30%), and the strength of films. [Abstracter's note: Complete translation.]

Card 2/2

S/081/62/000/023/096/120
B101/B186

AUTHORS: Makarov-Zemlyanskiy, B. Ya., Bokov, Yu. S., Makarov-
Zemlyanskiy, Ya. Ya., Pavlov, S. A.

TITLE: Polycondensation of xylotrihydroxy glutaric acid with
hexamethylene diamine

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 23, 1962, 681, abstract
23F118 (Nauchn. tr. Mosk. tekhnol. in-t legkoy prom-sti,
no. 23, 1961, 35 - 43)

TEXT: The polycondensation of the salt of trihydroxy glutaric acid and
hexamethylene diamine was studied at high temperatures in the melt
(165 - 200°C, in the atmosphere of purified N₂) and using solvents
(tricresol and xylene) at 170 and 180°C. The kinetic curves for the
polycondensation were plotted. The rate of formation of the linear
polyamide (PA) was shown to be lower than that of a three-dimensional
compound through interaction of the hydroxyl groups of neighboring chains.
The resulting PA (molecular weight 950) was found to be unusable as
film-forming agent for artificial leather. The possibility of a
Card 1/2

MAKAROV-ZEMLIANSKIY, B.Ya., kand.tekhn.nauk; DRIDZE, S.M., inzh.;
PAYLOV, S.A., prof., doktor tekhn.nauk

Use of polyamide finishing coatings in manufacturing artificial leather with a nitrocellulose base. Izv.vys.ucheb.zav.;
tekhn.leg.prom. no.3:20-24 '59. (MIRA 12:12)

1. Moskovskiy tekhnologicheskiy institut legkoy promyshlennosti.
Rekomendovana kafedroy tekhnologii iskusstvennoy kozhi.
(Leather, Artificial)

MAKAROV-ZEMLYANSKIY, B.Ya.

PAVLOV, S.A.; MAKAROV-ZEMLYANSKIY, B.Ya.

Combining polyamides with other high molecular weight substances
in order to change their mechanical properties and to increase the
adhesion and hygroscopicity of obtained films. Soob.o nauch.rab.
chl.VKHO no.3:53-56 '55. (MIRA 10:10)
(Amides) (Macromolecular compounds)

MAKAROV-ZEMLYANSKIY, B. YA.

"Modification of the Properties of Polyamide Films for Artificial Skin Resulting From the Addition of Other High-Molecular Substances." Cand Tech Sci, Moscow Technological Inst of Light Industry imeni L. M. Kaganovich, Min Higher Education USSR, Moscow, 1955. (KL, No 7, Feb 55)

SO: Sum. No. 631, 26 Aug 55-Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (14)